Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) Triazolopyrimidines A compound of the formula

in which

- R1 represents optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, or optionally substituted heterocyclyl, which is linked via carbon,
- R² represents hydrogen, halogen, optionally substituted alkyl, or optionally substituted cycloalkyl,
- R³ represents optionally substituted heterocyclyl,
- X represents halogen, cyano, optionally substituted alkyl, optionally substituted alkoxy, optionally substituted alkylthio, optionally substituted alkylsulphinyl, or optionally substituted alkylsulphonyl.
- 2. (Currently amended) Triazolopyrimidines of the formula (I) according to The compound of Claim 1, in which
 - R¹ represents alkyl having 1 to 6 carbon atoms, which may be substituted one to five times, identically or differently, by halogen, cyano,

hydroxy, alkoxy having 1 to 4 carbon atoms, $tri(C_1-C_4 \text{ alkyl})$ silyl and/or or cycloalkyl having 3 to 6 carbon atoms, which may be substituted one to three times, identically or differently by halogen, halogenalkyl having 1 or 2 carbon atoms and 1 to 5 halogen atoms and/or or alkyl having 1 to 4 carbon atoms, or

- R¹ represents alkenyl having 2 to 6 carbon atoms, which may be substituted one to three times, identically or differently by halogen, cyano, hydroxy, alkoxy having 1 to 4 carbon atoms, tri(C₁-C₄ alkyl)silyl and/or or cycloalkyl having 3 to 6 carbon atoms, which may be substituted one to three times, identically or differently by halogen, halogenalkyl having 1 or 2 carbon atoms and 1 to 5 halogen atoms and/or or alkyl having 1 to 4 carbon atoms, or
- R¹ represents alkynyl having 3 to 6 carbon atoms, which may be substituted one to three times, identically or differently by halogen, cyano, alkoxy having 1 to 4 carbon atoms, tri(C₁-C₄ alkyl)silyl and/or or cycloalkyl having 3 to 6 carbon atoms, which may be substituted one to three times, identically or differently by halogen, halogenalkyl having 1 or 2 carbon atoms and 1 to 5 halogen atoms and/or or alkyl having 1 to 4 carbon atoms, or
- R¹ represents cycloalkyl having 3 to 6 carbon atoms, which may be substituted one to three times, identically or differently by halogen, halogenalkyl having 1 or 2 carbon atoms and 1 to 5 halogen atoms and/or or alkyl having 1 to 4 carbon atoms, or

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- R¹ represents cycloalkenyl having 3 to 6 carbon atoms, which may be substituted one to three times, identically or differently by halogen and/or or alkyl having 1 to 4 carbon atoms, or
- R¹ represents saturated or unsaturated heterocyclyl, linked via carbon, having 5 or 6 ring members and 1 to 3 heteroatoms, such as nitrogen, oxygen, and/or or sulphur, the heterocyclyl able to be optionally substituted once or twice by halogen, alkyl having 1 to 4 carbon atoms, cyano, nitro, alkoxy having 1 to 4 carbon atoms, cycloalkyl having 3 to 6 carbon atoms, halogenalkyl having 1 to 4 carbon atoms and 1 to 9 halogen atoms, and/or or halogenalkoxy having 1 to 4 carbon atoms and 1 to 9 halogen atoms
- R² represents hydrogen, fluorine, chlorine, bromine, iodide, alkyl having 1 to 4 carbon atoms, halogenalkyl having 1 to 4 carbon atoms and 1 to 9 halogen atoms, or cycloalkyl having 3 to 6 carbon atoms,
- R³ represents saturated or unsaturated heterocyclyl having 5 or 6 ring members and 1 to 4 heteroatoms, such as oxygen, nitrogen and/or or sulphur, the heterocyclyl being able to be optionally substituted one to four times, identically or differently by fluorine, chlorine, bromine, cyano, nitro, alkyl, alkoxy, hydroximinoalkyl or alkoximinoalkyl each having 1 to 3 carbon atoms per alkyl part,

halogenalkyl or halogenalkoxy each having 1 to 3 carbon atoms and 1 to 7 halogen atoms,

and

- X represents fluorine, chlorine, bromine, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, alkylsulphinyl having 1 to 4 carbon atoms, or alkylsulphonyl having 1 to 4 carbon atoms.
- 3. (Currently amended) Triazolopyrimidines of the formula (I) according to The compound of Claim 1 or 2, in which
 - R¹ represents a residue of the formula

(Key: oder - or steht - represents)

or

R¹ represents a residue of the formula

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or

R¹ represents a residue of the formula

wherein # marking marks the linkage point in each case,

- R² represents hydrogen, fluorine, chlorine, bromine, iodide, methyl, ethyl, isopropyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, trifluoromethyl, 1-trifluoromethyl-2,2,2-trifluorethyl, or heptafluoroisopropyl,
- R³ represents pyridyl, which is linked in the second or fourth position and may be substituted one to four times, identically or differently, by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, methoxy,

- methylthio, hydroximinomethyl, hydroximinoethyl, methoximinomethyl, methoximinoethyl and/or or trifluoromethyl, or
- R³ represents pyrimidyl, which is linked in the second or fourth position and may be substituted one to three times, identically or differently, by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, methoxy, methylthio, hydroximinomethyl, hydroximinoethyl, methoximinomethyl, methoximinoethyl and/or or trifluoromethyl, or
- R³ represents thienyl, which is linked in the second or third position and may be substituted one to three times, identically or differently, by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, methoxy, methylthio, hydroximinomethyl, hydroximinoethyl, methoximinomethyl, methoximinomethyl, methoximinoethyl and/or or trifluoromethyl, or
- represents thiazolyl, which is linked in the second, fourth, or fifth position and may be substituted once or twice, identically or differently, by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, methoxy, methylthio, hydroximinomethyl, hydroximinoethyl, methoximinomethyl, methoximinoethyl and/or or trifluoromethyl,

and

- X represents fluorine, chlorine, bromine, cyano, methyl, methoxy, or methylthio.
- 4. (Currently amended) A method for producing triazolopyrimidines of the formula

 (I) according to one of Claims 1 through 3, characterized in that of preparing a

 compound of Claim 1 comprising:

(a) contacting dihalogen triazolopyrimidines of the formula

in which

R², R³, and R⁴ have the meanings specified in Claims 1-through 3,

X1 represents halogen and

Y¹ represents halogen

are reacted with metal compounds of the formula (III),

$$R^1$$
 – Me (III)

in which

R¹ has the meanings specified in Claims 1 through 3.

Me represents lithium, dihydroxyboranyl or a residue of the formula

(Key: oder = or)

wherein # marks the linkage point,

in which

Hal represents chlorine or bromine,
optionally in the presence of a diluent,
optionally in the presence of an acid acceptor,
and

optionally in the presence of a catalyst and the triazolopyrimidines of the formula (Ia) thus obtained are optionally reacted

$$R^2$$
 R^4
 R^3
(la)

in which

 R^1 , R^2 , R^3 and X^1 have the meanings specified in Claims 1-through 3, either

α) with compounds of the formula

$$R^4 - Me^1$$
 (IV)

in which

R⁴ represents optionally substituted alkoxy, optionally substituted alkylthio, optionally substituted alkylsulphinyl, optionally substituted alkylsulphonyl, or cyano

Me¹ represents sodium or potassium, optionally in the presence of a diluent,

or

B) with Grignard compounds of the formula

$$R^5 - Mg Hal^1$$
 (V)

in which

R⁵ represents optionally substituted alkyl and

Hal¹ represents chlorine or bromine,

in the presence of a diluent.

- 5-8. (Canceled)
- 9. (Currently amended) Dihalogen triazolopyrimidines A compound of the formula

in which

- R² represents hydrogen, halogen, optionally substituted alkyl or optionally substituted eyeloalkyl cycloalkyl,
- R³ represents optionally substituted heterocyclyl,
- X1 represents halogen and
- Y¹ represents halogen.
- 10. (Currently amended) A method for producing dihalogen triazolopyrimides of the formula (II) according to Claim 9, characterized in that preparing the compound of Claim 9 comprising:
 - (b) dihydroxy triazolopyrimidines contacting a compound of the formula

in which

R² and R³ which have the meanings specified in Claim 9,

are reacted with halogenation agents, optionally in the presence of a diluent,

wherein a compound of Claim 9 is prepared.

11. (Currently amended) Dihydroxy triazolospyrimidines The compound of Claim 10 of the formula

in which

- R² represents hydrogen, halogen, optionally substituted alkyl or optionally substituted cycloalkyl,
- R³ represents optionally substituted eyeloalkyl.. cycloalkyl.
- 12. (Currently amended) A method for producing dihydroxy triazolopyrimidines of the formula (VI) according to Claim 11, characterized in that preparing the compound of Claim 11, comprising:
 - (c) heterocyclyl malonic esters contacting a compound of the formula

$$R^3$$
 COOR⁶ (VII)

in which

R³ has the meaning specified in Claim 11 and

R6 represents alkyl having 1 to 4 carbon atoms,

are reacted with aminotriazoles with a compound of the formula

$$N$$
 N
 R^2
(VIII)

in which

R² has the meaning specified in Claim 11, optionally in the presence of a diluent and optionally in the presence of an acid binder, wherein a compound of Claim 11 is prepared.

13. (Currently amended) Pyridyl malonic esters A compound of the formula

$$COOR^6$$
 $COOR^6$
 $(VII-a)$

in which

- R6 represents alkyl having 1 to 4 carbon atoms and
- R⁷ represents halogen or halogenalkyl.
- 14. (Currently amended) A method for producing pyridyl malonic esters of the formula (VII-a) according to Claim 13, characterized in that preparing the compound of Claim 13 comprising:
 - (d) halopyridines contacting a compound of the formula

$$\bigvee_{\mathbb{R}^7}^{\mathbb{N}} Y^2$$
 (IX)

in which

R⁷ has the meaning specified in Claim 13 and

Y² represents halogen,

are reacted with malonic esters of the formula

$$COOR^6$$
 (X)

in which

R⁶ has the meaning specified in Claim 13,

optionally in the presence of a diluent, optionally in the presence of a copper salt, and optionally in the presence of an acid acceptor, wherein a compound of Claim 13 is prepared.

15. (Currently amended) Pyrimidyl malonic esters A compound of the formula

$$R^{10}$$
 $COOR^{6}$
 $COOR^{6}$
 R^{9}
 R^{8}
 $COOR^{6}$
 $COOR^{6}$

in which

R6 represents alkyl having 1 to 4 carbon atoms,

R8 represents halogen or halogenalkyl, and

R⁹ and R¹⁰ independently of one another, represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl or methoxy.

- 16. (Currently amended) A method for producing pyrimidyl malonic esters of the formula (VII-b) according to Claim 15, characterized in that preparing the compound of Claim 15, comprising:
 - (e) halopyrimidines contacting a compound of the formula

$$R^{10}$$
 Y^3
 R^9
 R^8
 R^8
 (XI)

in which

 R^8 , R^9 and R^{10} have the meanings specified in Claim 15 and

Y³ represents halogen,

are reacted with malonic esters of the formula

$$COOR^6$$
 (X)

in which

R⁶ has the meaning specified in Claim 15,
optionally in the presence of a diluent, optionally in the presence of a copper salt,
and optionally in the presence of an acid acceptor, wherein a compound of
Claim 15 is prepared.

- 17. (New) A composition comprising at least one compound of Claim 1.
- 18. (New) The composition of Claim 17, further comprising extenders and/or surfactants.
- 19. (New) A method for combating undesired micro-organisms, comprising contacting said micro-organisms or said micro-organisms' living space or both with the composition of Claim 17.
- 20. (New) A method for preparing the composition of Claim 18, comprising mixing one or more said compounds with said extenders and/or surfactants.